An overview of risk factors associated to *post-partum* depression in Asia

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Abstract

Post partum depression (PPD) is an important complication of child-bearing. It requires urgent interventions as it can have long-term adverse consequences if ignored, for both mother and child. If PPD has to be prevented by a public health intervention, the recognition and timely identification of its risk factors is must. We in this review have tried to synthesize the results of Asian studies examining the risk factors of PPD. Some risk factors, which are unique to Asian culture, have also been identified and discussed. We emphasize on early identification of these risk factors as most of these are modifiable and this can have significant implications in prevention of emergence of post partum depression, a serious health issue of Asian women.

Introduction

Post-partum depression (PPD) is the most common complication of childbearing, occurring in 10-15% of women after delivery.[1] It usually begins within the first six weeks post partum and represents a considerable public health problem affecting women and their families.[2]

The effects of postnatal depression on the mother, her married life, and her children make it an important condition to diagnose, treat and prevent.[3] Whilst very severe postnatal depression can easily be diagnosed, less severe presentations of depressive illness can be easily dismissed as normal or natural phenomena of childbirth. Consequently, this untreated *post-partum* depression can have long-term adverse effects, both on mother and her children. If PPD is to be prevented by clinical or public health intervention, its risk factors (*i.e.* factors which could significantly predict the occurrence of PPD) need to be faithfully identified. Studies in the developing world have found that risk factors are often culturally determined. This review aims at improving our understanding of the culturally determined risk factors of PPD within Asian culture.

Materials and Methods

We conducted a literature search using PubMed and PsychINFO databases. The keywords used were *risk factors*, *post partum*, *post-natal*, *after child birth*, *Asia* and *depression*. Articles published in English language or providing an abstract (with complete information) in English were included in this study. The studies included have to be the original research articles in the form of observational cohorts and surveys. All the articles which focused on factors associated to PPD in Asian context were then selected. The factors which showed significant association with development of PPD were considered as risk factors for PPD. Assessment of PPD could be done both by structured clinical interview and self-rated questionnaire in studies selected. The studies that relied on special subgroups (*e.g.*, pregnant or postpartum women with HIV infection) were eliminated; 27 studies were thus identified and the data regarding the number of subjects, mode and time period of assessment were further extracted from the identified studies, which are mentioned further.

Results and Discussion

Number of risk factors were identified on analyzing the selected studies. The following table (Table 1)[4-30] shows the list of studies which have analyzed the possible risk factors for PPD in Asian context. The risk factors thus identified from various studies can be grouped as following categories.

Demographic factors

Among these, the factors which have shown significant association with PPD are age of mother at the time of child birth as well as older age at marriage.[4] Second, being migrant and giving birth to child overseas has also been identified as a risk factor for PPD. In a study examining Japanese women, who were born and raised in Japan but who gave birth to their child in Hawaii, USA, half of the participants experienced emotional dysfunction during their pregnancy. All primipara females experienced *post-partum* depression. The participants who had maternity blues tended to have PPD.[5] Another study assessing the incidence of PPD symptomatology in a sample of immigrant Asian Indian women found that there was a minor depressive symptomatology rate of 28% and an additional major depressive symptomatology rate of 24%.[6] Different health care attitudes in different cultures and distance from family leading to homesickness could be the possible reasons. However, no consistent association of PPD has been found with maternal education.[7] Lower socio-economic status has been found to be another factor associated with PPD. Although pregnancy and childbirth are generally viewed as a time of joy and pleasure in most of the families, they also put on financial burden in form of expenses for a new member of the family, especially, among low-income families or nuclear families, where the husband is the only one who provides family income.[8,9] This can cause depression in new mothers. Only one study has found the association of religion with PPD.[10]

Clinical factors

An important factor which can lead to PPD is parity. It has been observed that frequency of primi-parity is higher in women with PPD.[5,11] Having 5 or more children was responsible for persistence of prenatal depression beyond the first few postnatal months.[8] On the contrary, one study found significant association of multi-parity with PPD.[12]

Another significant factor is unplanned/unwanted or negative attitude toward pregnancy.[13,14] A study by Limlomwongse and Liabsuetrakul (2006) found that negative attitudes towards this pregnancy double the risk of PPD.[10] Premarital pregnancy is another risk factor for PPD which is important in context of Asian countries. It is considered highly unacceptable in most Asian culture, reason being a highly conservative attitude toward sex among Asian people than people in the west. Getting pregnant before marriage may reflect that the woman had experienced a premarital sexual intercourse, which is considered as a shame or

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taboo in many of the Asian countries.[31-35] However, unplanned or unwanted pregnancy as a risk factor for PPD should be interpreted very cautiously. It merely reflects the circumstances in which the pregnancy occurred and not the feeling of woman towards the growing fetus.

History of premenstrual symptoms,[15,16] previous depression or having depression during pregnancy,[9,12] prenatal high anxiety,[14] history of *post-partum*,[17] or maternity blues,[5,16] have all been consistently demonstrated as putative risk factors for PPD. The studies examining these factors provide preliminary evidence that some hormone-related phenomena are related to the occurrence of *post-partum* mood disorders. The results in a way support the notion that the etiology for *post-partum* mood disorders may be related to differential hormonal sensitivity. Such risk factors should be carefully assessed and evaluated clinically in detail when dealing with a woman of PPD.

Others include physical ill-health,[7] pregnancy complications or woman's perception of having complications during this pregnancy,[10] preterm delivery,[18] and history of pregnancy loss.[12]

A study by Dindar and Erdogan (2007) found smoking to be significant risk factor for PPD in Turkish women.[9]

However, there are some contradictory views in literature too. In one study, risk of PPD was not found to be related to age, level of education, employment status, planned/unplanned pregnancy, history of abortion and pregnancy-related complications, term and type of delivery, gender of the child, and mother's breast-feeding and other reporting no relation between method of delivery and risk of PPD.[7,11]

Psychosocial factors

Psychosocial factors that were found to be associated with postnatal depression are living in mixed/conflicting influences of culture,[19] poor accommodation,[20] lack of social support,[17,21,22] lack of instrumental support or medical resources,[23] stressful life events during pregnancy,[9,15] lack of confidant/friend,[7] conflicts/being abused by in-laws,[4,12,24] and conflicts with relatives over child care.[23]

There are different types of social support, for example informational support (where advice and guidance is given), instrumental

Table 1. Risk factors associated to *post-partum* depression.

Author	Country	Overall sample size	Mode of assessment	Time of assessment
Green *et al.*[4]	United Arab Emirates	125	EPDS	3 and 6 months *postpartum*
Taniguchi *et al.*[5]	Japanese migrants in USA	45	Telephonic interview	Within 1 year of child-birth
Goyal *et al.*[6]	Asian-Indian immigrants in Australia	58	PPD screening scale	Between 2 weeks and 12 months *postpartum*
Small *et al.*[7]	Vietnamese, Turkish and Filipino immigrant	318	Personal interviews	N/A
Rahman *et al.*[8]	Pakistan	160	SRQ, BDQ, modified Life Events Checklist	At 3, 6 and 12 months *postpartum*
Dindar *et al.*[9]	Turkey	679	EPDS, Risk Factor questionnaire	Within first year after delivery
Limlomwongse *et al.*[10]	Thailand	610	EPDS	6-8 weeks *postpartum*
Akman *et al.*[11]	Turkey	302	Structured clinical interview	First day of child birth and 6 weeks *postpartum*
Ho-Yen *et al.*[12]	Norway	426	EPDS	5-10 weeks after delivery
Andajani-Sutjahjo *et al.*[13]	Indonesia	41	EPDS	6 weeks *postpartum*
Sayil *et al.*[14]	Turkey	200	Structured interview	6-8 months *postpartum*
Aydin *et al.*[15]	Turkey	728	EPDS, Structured interview	Within 1st postnatal year
Bloch *et al.*[16]	Israel	1800	Structured interview	6-8 weeks *postpartum*
Ayvaz *et al.*[17]	Turkey	316	EPDS, GHI, BAI, BDI	6-8 weeks and 6 months *postpartum*
Tamaki *et al.*[18]	Japan	627	EPDS, STAIS	1,3 and 4 months after delivery
Leung *et al.*[19]	Hong-Kong and Chinese	11	Structured interview	6 months *postpartum*
Kitamura *et al.*[20]	Japan	290	DSM-III-R criteria for depression	Within 3 months of delivery
Liabsuetrakul *et al.*[21]	Thailand	400	PDRS, DSM-IV for depression	6-8 weeks *postpartum*
Husain *et al.*[22]	Pakistan	149	EPDS, MSPSS, PIQ	12 weeks *postpartum*
Chee *et al.*[23]	Singapore	559	Screening questionnaire, structured interview	6 weeks *postpartum*
Lee *et al.*[24]	Chinese women in Hong-Kong	959	EPDS	Immediately after delivery, 3 months *postpartum*
Danaci *et al.*[25]	Turkey	317	EPDS	6 months *postpartum*
Fisher *et al.*[26]	Vietnam	506	Structured interview, EPDS	6 weeks *postpartum*
Rodrigues *et al.*[27]	India	39	EPDS	N/A
Azidah *et al.*[28]	Malaysia	421	EPDS, questionnaire on psychosocial support and traditional post natal care	1 week and 4-6 weeks *postpartum*
Leung *et al.*[29]	Hong-Kong Chinese women	385	EPDS	N/A
Sabuncuoglu *et al.*[30]	Turkey	80	EPDS, AAQ	Within 2 to 18 months *postpartum*

PPD, post-partum depression; EPDS, Edinburgh postnatal depression scale; BAI, Beck's anxiety inventory; BDI, Beck's depression inventory; GHI, general health inventory; STAIS, State trait anxiety inventory state; PDRS, *postpartum* depression risk scale; MSPSS, multidimensional scale of perceived social support; PIQ, personal information questionnaire; DSM, diagnostic and statistical manual of mental disorders

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support (practical help in terms of material aid or assistance with tasks) and emotional support (expressions of caring and esteem). As social support has been demonstrated to be important in transition to motherhood and has an impact on emotional coping, lack of such social support can be a potent predictor for postpartum depression in some women.[21,23]

Conflicts between mother- and daughter-in-law are notoriously common in Asian societies.[24] In Asian societies, traditionally, marriage means a daughter-in-law joining the family and adjusting accordingly rather than composing a new household for the newlyweds. The daughter-in-law is commonly entrusted to the supervision and control of her mother-in-law, who is generally portrayed as authoritarian.[24] Thus, appropriately some studies have demonstrated mother-in-law conflicts as a significant problem among married women in those countries.[25,36] These conflicts may stand responsible for emergence of PPD.

Husband/marriage related factors

The factors which fall into this category are psychiatric illness in husband,[25] current alcoholism,[9] poor educational status,[8] uncertainty about husband's work/unemployment,[13,15] husband's polygamous relationships (9), disturbed relationships with husband or marital conflict,[12,14] lack of support from husband,[15,26] regret for marriage,[13] and low involvement of husband over child care.[27]

Child-related factors

Regarding child-related factors, health problems of child,[15] dissatisfaction with child's gender (birth of a girl child),[12,21] birth defects in child,[13] child's temper tantrums,[15] child's feeding difficulties,[7] stress with child care,[28,29] and only short period of rest/exhaustion after childbirth,[26] were all associated with PPD. In terms of gender of the child, there are quite a few studies that suggest dissatisfaction in infant's gender (birth of a baby girl) is amongst the risk factors for postpartum depression. This implies the significance of infant's gender in Asian Family. In some Asian cultures, married couples are expected by their family to have at least one son to maintain the continuity of the bloodline.[36] In Turkey, a baby boy is seen as a source of income. Women who cannot give birth to a baby boy may be considered incapable, leading to serious problems in the marriage.[12]

Logically, variables relating to the child can be measured postpartum only. It has been found that mothers suffering from postpartum depression give more negative descriptions of their children than control mothers and report more behavioral problems in their children.[37] Therefore, the mothers' symptoms may be a source of bias in the reporting of child characteristics and the results of such studies examining child-related factors must be viewed with caution.

Miscellaneous

Poor self body image with weight conscience,[4] personality disorders (*e.g.* avoidant, dependent, and obsessive-compulsive),[11] insecure attachment style,[20] are the other factors which have been shown to increase the risk of emergence of PPD in women.

Conclusions

There are several risk factors for this highly prevalent problem of postpartum depression in Asian countries, some of which are unique to Asian culture. It is likely that a interplay of these factors play a role in the causation of postpartum depression. Taking care of these largely modifiable risk factors can prevent development of postpartum depression. A collaborative-care approach (for example, collaboration between a mental-health professional and an obstetrician) would be reasonable to identify mothers who are at high-risk for development of PPD. Resolution of marital and family conflicts before conception, helping the mothers to establish a support plan, have realistic expectations of birth and parenting, addressing self-esteem issues and encouraging them to quit smoking could be some of the ways to prevent PPD.

Although an over-simplification, following scenario can portray the results from the synthesis of literature on risk factors of postpartum depression and can help in better understanding of the results: *her clinical history may reveal previous experience of psychiatric illness, and she may have suffered from depressive or anxious symptoms during pregnancy. She may be experiencing difficulties through stressful life events and a poor marital relationship. She perceives that her partner, family and friends are not as supportive as they could be*.

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